

Maoris and Muskets in New Zealand: Disruption of a War System*

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The New Zealand Maoris live and work now in peace as citizens of a modern nation, but they are a people who, like some North American Indian groups and the Zulu of Africa, first became famous as warriors. A great deal has been written about Maori warfare. Particularly those aspects which seemed strange to European observers—cannibalism, the taking of heads, fighting in order to avenge verbal insults—have been richly and conspicuously documented, but copious materials on other aspects have also been made available by observers and students of Maori life in the two centuries since Captain Cook and other Europeans first landed in New Zealand. In this paper these materials are used to indicate that Maori warfare had an adaptive function within a system operating in pre-European times and to show that the effect of certain changes brought about through contacts

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with Europeans in New Zealand in the early nineteenth century was to disrupt this function and to make the war system maladaptive. In other words, our main point is to show a way in which maladaptations involving warfare may have their sources in adaptations in the past. Further, the materials on pre-European times in New Zealand allow us to call attention to something overlooked by many writers who consider revenge to be a main goal or cause of primitive warfare, namely, the possibility that important systemic connections exist between land use and fighting for revenge.

The Pre-European System: Warfare, Land Use, and Revenge

It is appropriate to deal here with the traditional setting of Maori warfare. The Maoris' ancestors, who came in their canoes from the small, tropical islands of eastern Polynesia, found in the temperate, continental land mass of New Zealand a new and challenging environment. At the time of Cook's arrival in 1769, the Maoris, after centuries of living in New Zealand and after having hunted the moa and other indigenous species of flightless birds to extinction, were still in the process of adapting to this environment and extending their exploitation of it.

Warfare was part of that process in the late eighteenth century. The roughly forty Maori tribes of New Zealand comprised at this time some 100,000 to 300,000 people but a considerably larger population could probably have been sustained even without the introduction of European technology. A New Zealand geographer, Kenneth B. Cumberland, has gone so far as to say that a million Maoris could have been supported "in view of the reserves of bird life, fish, forest fruit, and timber and of cultivable soil, and in view of the equipment at the disposal of the people, their skills, and their knowledge."¹ This is probably an exaggerated estimate, but the important point is that there still was unexploited or underexploited land where the Maoris could have hunted, fished, grown their sweet potatoes, or dug the fernroots which were a staple of their diet, and the question that presents itself is what was the role of warfare in moving people to such land.

¹ "Aotearoa Maori: New Zealand about 1780," *Geographical Review*, 39 (1949), 417.

As long as growing tribes or subtribes were able to expand into virgin land adjoining areas already being used by them, the increase and spread of the Maori population from its small beginnings in the early period of settlement could take place peacefully.² However, as soon as there were groups whose territory adjoined only the territory of other groups rather than any unoccupied land suitable for exploitation by Maori tools and techniques, warfare could have a role. The process of expansion could have taken place among the kinship-organized, genealogy-conscious Maoris very much as it did among the Tiv of northern Nigeria, a people whose recognized technique for the expansion of land holdings was, as recorded by the anthropologist Paul Bohannan, a simple one:

... always, when you make new farms, clear land towards that man whose land bounds yours, but who is more distantly related to you. When he objects, you are thus assured of the largest possible supporting group in any litigation, argument, or fight which may develop, since all the people who are more closely related to you than to him will come to your aid instead of his.³

The expansion of the Tiv in all directions was still going on during Bohannan's term of field work, and the kinds of opportunities that Bohannan had for observing the process of expansion are, of course, denied to the student of Maori society. Yet there is evidence that the process among the Maoris not only could have been but actually was similar in some significant respects. The influence of considerations of genealogical proximity in determining to whom aid would be given in Maori warfare is shown, for example, in a European trader's eyewitness account of fighting between two sections of the Nga Puhi tribe in 1837. The trader, J. S. Polack, noted that the Hokianga natives, arriving after the hostilities had begun, were sorely puzzled which of the two parties to join, as they were equally related to both.⁴ There are, moreover, many examples in pre-European New Zealand of conquests

² This and the succeeding two paragraphs are taken, with some changes, from my "Expansion and Warfare among Swidden Agriculturalists," *American Anthropologist*, 63 (1961), 348-50.

³ Bohannan, "The Migration and Expansion of the Tiv," *Africa*, 24 (1954), 5.

⁴ Polack, *New Zealand* (London, 1838), II, 42.

involving displacement of vanquished foes from their territories, and there are cases too of beaten and displaced groups which, in turn, became the vanquishers and displacers of yet other groups.⁵ There is evidence, in other words, that among the Maoris a chain-reaction process of aggressive territorial expansion operated in which the more closely related people or groups supported each other against the less closely related and unrelated. In this process, the expansion of one group, by means of warfare, into the contiguous territory of another could lead the second group to expand into the contiguous territory of a third, and so forth until finally there would be displacement of a group having territory contiguous to unoccupied land.

At this point, we have already gone some way towards indicating the adaptive function of Maori warfare within a traditionally operating system, and we may be able to say that warfare had the function of maintaining the dispersion of people over the land and that this function was adaptive for the Maoris as a whole because it entailed a more extensive exploitation of the total New Zealand environment which, in turn, enabled the Maori population to continue to grow without the over-exploitation and degradation of particular localities. However, some important questions remain about the system within which the dispersion of people through warfare operated. When we talk about the functions of an activity like warfare, we are talking about certain kinds of regular consequences which it has. More specifically, in my use of the term *function* the consequences always involve the restoration of some systemic variable, like the degree of population dispersion, to a proper, advantageous, or acceptable state.⁶ Without elaborating here on the reasons for using the term in this way, we may simply note that specifying the consequences of an activity still leaves the question of the motivations that people have for engaging in it and, further, the question of the extent to which these motivations themselves might be components of a system and might be

⁵ See the citations in my *Maori Warfare* (Wellington, 1960), 110, 115.

⁶ Andrew P. Vayda, "Hypotheses about Functions of War" in Morton Fried *et al. (eds.), War: The Anthropology of Armed Conflict and Aggression* (Garden City, N.Y., 1968), 85, 102-05; Paul W. Collins and Andrew P. Vayda, "Functional Analysis and Its Aims," *Australian and New Zealand Journal of Sociology*, 5 (1969), 153-56.

operating in response to systemic forces rather than arbitrary or capricious ones.

In the course of centuries, Maori warriors have had, no doubt, a considerable variety of individual, situationally determined, and idiosyncratic motives for taking up arms; however, the two main recurrent motives of the Maoris for initiating war were to acquire land and to revenge themselves upon groups that committed offenses against them. The offenses provoking tribes or subtribes to seek vengeance include homicide or other violence either by physical or fancied magical means against members of the group (including women married to the offenders); trespass or poaching on food preserves claimed by the group; adultery with women of the group; theft of valuables; and insults to the group or, what amounts to the same thing, to a chiefly member of it.

When the motive was acquiring territory, the likely systemic relations were, at least in a gross way, fairly obvious ones. As the pressure of the people upon their existing territory would increase, so would their motivation to fight in order to conquer additional territory, and the growing size of a group would enhance not only the territorial ambitions of its members but also the likelihood of its success in both conquering and exploiting another group's land. It has not been usual in discussions of Maori warfare to regard this territorial motive and the revenge motive as operating within a single system. Indeed, one scholar has gone so far as to suggest that each motive was characteristic of a different phase of Maori prehistory.⁷ This, however, is an interpretation inconsistent with the available evidence,⁸ and it is possible to set forth an alternative interpretation showing systemic connections between the motives and between the fighting they lead to.

It must be noted first that Maoris committing offenses that had to be avenged could have often been expressing in this way, consciously or unconsciously, the need of their groups for more territory. This is perhaps most obviously so in the case of offenses such

⁷ Peter H. Buck (Te Rangi Hiroa), *The Coming of the Maori* (Wellington, 1949), 381, 387.

⁸ Thus, the conquest of the Auckland isthmus (see n. 20) occurred during what Buck regards as a period of stabilized land when wars were not fought for territory.

as trespass or poaching on other groups' food preserves, but murders and other physical assaults and even insults could also result from the increasing pressure of population upon the land. A concomitant of this pressure would be a diminishing per capita food supply and increasing intra-group competition for resources, both of which would contribute to domestic frustrations and other in-group tensions which might eventually find release in verbal or physical violence against members of other groups. Possible illustrations of this process are the examples that some authors give of a "peculiar custom" or "curious idea" of the Maoris: the murder of outsiders by someone because he has been injured or aggrieved by members of his own group and because he wishes therefore to "put his own people in the wrong" and thus make them subject to reprisals from the murder victims' groups.⁹ However, the occurrences of this practice were no doubt rare, and many offenses may have served to give vent to hostile or aggressive feelings without any deliberate intention of incurring the wrath of another group.

The offended groups did not have to retaliate immediately.¹⁰ They could bide their time, and, indeed, the memory of unavenged injuries was sometimes handed down from generation to generation like an heirloom. The Maoris had, moreover, some non-war-like means for assuaging the desire for revenge. Thus, a more or less virulent song could be composed and sung. Or witchcraft could be performed. Some groups, knowing themselves to be weak, undoubtedly tried to remain at home in peace rather than march against stronger groups that had insulted or injured them. But this policy would, in effect, be an invitation to the offending groups to continue their offenses and to increase their frequency and magnitude.¹¹ Eventually a weak group might then be confronted on its home grounds with a powerful attacking force, consciously

⁹ Thomas Wayth Gudgeon, *The History and Doings of the Maoris* (Auckland, 1885), 28-29; Edward Shortland, *Traditions and Superstitions of the New Zealanders* (2d ed.; London, 1856), 20; Edward Tregear, *The Maori Race* (Wanganui, 1904), 326-27.

¹⁰ The first part of this paragraph is based on Vayda, *Maori Warfare*, 43-45.

¹¹ This is well expressed by a chief in one New Zealand writer's account of a Maori council of war: "To pass over such an unprovoked insult would be to end in the truth of the accusation of cowardice. . . . If we do not take revenge for this act of aggression they will become bolder, and it will be unsafe for us to move"; John White, *Te Rou; or the Maori at Home* (London, 1874), 16-17.

motivated now to annihilate or rout the group and to take over its territory. Yet the policy of non-retaliation was not totally futile, for it could also happen that the enemy would have its hands full with campaigns against other groups and it might even encounter some reverses rendering it incapable of further attacks.

In any event, Maoris were strongly motivated to pursue policies of retaliation rather than non-retaliation. Suffering injuries meant to them a spiritual as well as physical weakening and, accordingly, required the injured to strive to heal themselves by deeds that would restore their repute, their courage, their feeling of strength and wholeness. This way of thinking about injuries and about the necessity for avenging them are said to have been among the first lessons taught to Maori children. By the time the children were grown, they regarded revenge to be a vital point of honor and one of the most important duties of man—something to be pursued in spite of danger and difficulty and every fatigue and privation.¹²

It seems likely then that unless a group was so weak that its members could not possibly entertain some hope of success in a warlike enterprise, revenge would be sought by force of arms against offending groups. And the greater its sense of offense, the greater the incitement to its warriors. The offenses would be recounted with vehemence at public meetings which also featured inflammatory, warlike songs and chants and displays with weapons. The men would become eager to gird themselves with their flaxen war belts and set forth as a *taua toto*, a war party with the object of blood revenge for injuries received.¹³

¹² Revenge as a Maori value has often been discussed. See, for example, Elsdon Best, *The Maori* (Wellington, 1924), II, 232; Buck, *Coming of the Maori*, 388; James Busby, *Authentic Information Relative to New South Wales and New Zealand* (London, 1832), 62; Hugh Carleton, *The Life of Henry Williams, Archdeacon of Waimate*, (ed.) J. Elliott (Wellington, 1948), 178; James Cook, *The Journals of Captain James Cook on His Voyages of Discovery*, (ed.) J. C. Beaglehole (Cambridge, 1967), III, 71; W. E. Gudgeon, "The Toa Taua or Warrior," *Journal of the Polynesian Society*, 13 (1904) 258-60; J. Prytz Johansen, *The Maori and His Religion in Its Non-Ritualistic Aspects* (Copenhagen, 1954), 61-83; Shortland, 230; S. Percy Smith, *The Peopling of the North* (Supplement to the *Journal of the Polynesian Society*, 1896-97), 72; and S. Percy Smith, *Maori Wars of the Nineteenth Century* (Christchurch, 1910), 329-30.

¹³ For descriptions of Maori councils of war, see Buck, *Coming of the Maori*,

Blood revenge was satisfied by the initial shedding of the enemy's blood. Indeed, according to some writers on Maori warfare, the procedure for avenging a murder was simply to proceed in secret to the offenders' place and there slay the first person encountered. By killing any member of the offenders' group, the warriors were revenged and could then return home with the satisfaction of a mission accomplished, even if circumstances precluded their inflicting further bloodshed on their enemy.¹⁴ When a Maori war party had the opportunity, however, it went on killing after its initial shedding of blood.¹⁵ If, for example, the enemy was completely surprised by the attack and offered no initial resistance, the number of lives taken could be so great as to make it the enemy's turn to feel that it had to obtain vengeance by force of arms. This must have happened often, since a major part of Maori tribal histories consists of what one Maori scholar calls a "seesaw record of military exploits."¹⁶

The existence of this pattern of raids and counter-raids for revenge is what may have led some scholars to warn against thinking of Maori warfare in the same terms as warfare among so-called civilized peoples and even to suggest that "its psychology was more that of a seriously taken game" and that it might "almost be termed a manly physical exercise."¹⁷ Certainly the small scale and short duration of active hostilities and the prominence of the revenge motive set Maori warfare apart from the type of warfare carried on by armies of state-organized societies. However, the contrasts must not be allowed to obscure important similarities, such as, for example, the fact that both types of warfare can result in territorial conquests and the redistribution of population. This

389; John Savage, *Savage's Account of New Zealand in 1805*, (ed.) A. D. McKinlay (Wellington, 1939), 35, 37; White, *Te Rou*, chap. 2.

¹⁴ Arthur S. Thomson, *The Story of New Zealand* (London, 1859), I, 124; Buck, *Coming of the Maori*, 388.

¹⁵ On this, see the section on "Pursuit and Mortality" in Vayda, *Maori Warfare*, 83-92.

¹⁶ Buck, *Coming of the Maori*, 388.

¹⁷ Ernest Beaglehole, "The Polynesian Maori" in I. L. G. Sutherland (ed.), *The Maori People Today* (Wellington, 1940), 63; Buck, "The Passing of the Maori," *Transactions and Proceedings of the New Zealand Institute*, 55 (1924), 364; cf. Best, II, 225.

admonition needs to be underscored, because just this kind of obscuring of similarities has taken place in the writings of numerous social scientists on the subject of primitive and modern, or state-organized, warfare.¹⁸ We are speaking here about social scientists who have based their generalizations upon their reading of ethnography rather than upon their own field work, and it is possible that what has misled them into seeing only blood feuds and revenge and not territorial conquests in primitive warfare is something referred to earlier: the general failure of ethnographers to note the systemic relations between the fighting undertaken for revenge and the fighting undertaken for territory. The crucial observation which the ethnographers have not made is that fighting for revenge, along with the offenses that give rise to it, can be part of a process of recurrent testing of manpower—the manpower available both for defending and for exploiting the land. In this process, groups passed the first part of their tests by attacking when strongly provoked and by defending themselves stoutly when attacked. The warfare in which they were involved at this stage can appear to have no relation to the conquest and use of land and to be only a series of raids and counter-raids for revenge or glory or exercise, but it is necessary to take due notice of more of the testing process. Committing offenses and fighting for revenge formed only the first part.

Following the process simply to the point where some groups failed to defend themselves or to retaliate adequately and their enemies, perceiving this, responded with conscious attempts to conquer their land is itself sufficient to indicate a connection between fighting for revenge and fighting for territory. The testing process did not end, however, with outright attempts at taking land. If an attempt was successful to the extent that a group, having had a succession of victories over one section after another of a particular enemy tribe, was able to move into the territory of its beaten foe, some of the latter might still have

¹⁸ See, for example, Alexander Lesser, "War and the State," in Fried, 95; Julian H. Steward and Demitri B. Shimkin, "Some Mechanisms of Sociocultural Evolution" in Hudson Hoagland and Ralph W. Burhoe (eds.), *Evolution and Man's Progress* (New York, 1962), 79; Quincy Wright, *A Study of War* (2d ed.; Chicago, 1965), 73-74.

tried to maintain a claim to the territory by "keeping their fires alight" somewhere within it, i.e., by keeping their cooking-fires going and by digging fernroot, farming small pieces of ground, snaring birds, trapping rats, and pursuing other economic activities in some mountain or forest places not readily accessible to the conquerors. Such methods were used by defeated people as a stopgap, something to be continued until they could reconstitute their forces and try to repossess their entire territory. Conquerors could achieve no recognized rights to taken lands without actually occupying them to the utter exclusion of the original owners,¹⁹ and a long time could elapse before the victors could be certain of having accomplished this. Defeated people sometimes spent years in refuge at the settlements of friends and relatives and then came to try to wrest their land back from the conquerors.²⁰ In other words, the testing process had safeguards reducing the likelihood that groups with good fortune in war would take over land which they could exploit no better than could the vanquished. Military triumphs resulting from clever strategies or from luck could not lead to successful conquests if the victorious groups did not have the numbers and strength to use the defeated people's land and to resist their efforts to recover it.

Some warnings may be in order here. No extraordinary efficiency should be imputed to the process that we have been elucidating. For one thing, it could impair for both victors and vanquished, through the toll that it exacted in resources and lives, the very thing that it was testing for: the capacity to defend and exploit the land. However, our purpose has been simply to show that there was a testing process among the Maoris and that it involved fighting for revenge as well as fighting for territory. Noth-

¹⁹ On this and related aspects of Maori land tenure, see F. O. V. Acheson, "Maori Land Customs and Education: Their Inter-Relation" in P. M. Jackson (ed.), *Maori and Education* (Wellington, 1931), 133-43; Raymond Firth, *Primitive Economics of the New Zealand Maori* (London, 1929), chap. 11; Norman Smith, *Native Custom and Law Affecting Native Land* (Wellington, 1942); J. White, "Maori Customs and Superstitions" in T. W. Gudgeon, 183-216.

²⁰ For an early nineteenth century example, see Leslie G. Kelly, *Tainui* (Wellington, 1949), 297-98. How drawn out the testing process could be is well illustrated also by the mid-eighteenth century conquest of the Auckland isthmus from the Wai o Hua people by the Ngati Whatua; see the accounts in Smith, *Peopling of the North*, 83-91, and Kelly, *Tainui*, 253-57.

ing that has been said would warrant the conclusion that some alternative, which, for example, would have involved less bloodshed and killing and would not have required men to be always apprehensive and in dread that their enemies would surprise them, would not have worked better for the Maoris. The process that evolved is the object of our analysis because it was the process operating among them and not because it was necessarily the best way of doing things.

It must be emphasized that the Maoris did not see the process as a means for testing the manpower of groups and for correcting disparities between them in their man/resource ratios. Evolutionary development often results in processes with systemic properties not manifest to the people involved.²¹ Characteristically, the long-term adaptive advantages that accrue to populations as a result of such processes are, in some way, not sufficient rewards to individuals—for example, not sufficiently obvious, immediate, palpable—to be effective spurs to the actions required to keep the processes going. Accordingly, these actions are undertaken for other rewards which are more or less immediate, not necessarily material, and often taught to be morally desirable. Revenge in the Maori case is a good example of such rewards. People would act for revenge, even if they were oblivious that their actions might help provide exploitable environments to posterity.

We may say then, in summary, that in pre-European times the Maoris were motivated to commit offenses, take revenge, conquer land, and engage in various other actions that constituted, without their necessarily knowing it, essential operations of a system whereby the overall population of New Zealand could grow and be dispersed and whereby access to the resources sustaining this

²¹ Some other examples of this are cited in Andrew P. Vayda and Roy A. Rappaport, "Ecology, Cultural and Noncultural" in James A. Clifton (ed.), *Introduction to Cultural Anthropology* (Boston, 1968), 491-92. The "blind" variation and selective trait-retention that result in processes of the kind referred to are emphasized in some general discussions of sociocultural evolution; see, for example, Donald T. Campbell, "Variation and Selective Retention in Socio-Cultural Evolution" in Herbert R. Barringer *et al.* (eds.), *Social Change in Developing Areas* (Cambridge, Mass., 1965), 26ff.; George Peter Murdock, "How Culture Changes" in Harry L. Shapiro (ed.), *Man, Culture, and Society* (New York, 1956), 252ff.; Vayda, review of *The Evolution of Culture* by Leslie A. White, *Canadian Journal of Economics and Political Science*, 26(1960), 646-47.

process could be regulated. We shall see that European influence was disruptive to this adaptive system and resulted in heavy mortality, not because there was any waning of the traditional motivations but because many of the actions based on them had new effects after the introduction of a new technology of warfare and were no longer geared to local population pressures and to variations from group to group in the manpower for defending land and exploiting the available resources.

New Weapons in the Service of Old Objectives

We must speak first about the Maoris' new technology of warfare, and this means speaking, above all, about guns. These were not the only new weapons, for European hatchets, axes, and knives also came to be used in battle, but guns were the most significant introduction. The Maoris began to acquire them in the early years of the nineteenth century, and the first encounters with the weapons filled the people, understandably enough, with fear and awe.²² It did not take long, however, for some Maoris to acquire a more practical understanding of guns and their uses. This happened first along the eastern coasts of the northern part of New Zealand's North Island, an area which, initially, received the most frequent calls from trading and whaling ships. By 1814, when members of the Church Missionary Society came to the Bay of Islands in that area to establish a station, a local chief, Hongi Hika of the Nga Puhi tribe, had already been able to teach himself to stock and mount a musket without any help and he owned several of the weapons.²³ As we shall see, Hongi's affinity for guns eventually made him and his people a scourge to other tribes.

The first guns obtained by the Maoris from the Europeans were flintlocks, often of poor quality, since European traders had no great scruples about taking advantage of the Maoris' ignorance of firearms. Yet, as soon as guns came into use in Maori warfare,

²² See the accounts in John Liddiard Nicholas, *Narrative of a Voyage to New Zealand* (London, 1817), I, 253-54; J. White, *The Ancient History of the Maori* (Wellington, 1887-90), V, 172; Best, II, 286.

²³ Harrison M. Wright, *New Zealand, 1769-1840* (Cambridge, Mass., 1959), 86.

they were effective enough. Initially, one or two guns sufficed to give any war party the advantage in fighting against enemies unacquainted with the weapons, not so much because of the numbers killed by the guns as because of the inevitable panic. A good illustration of this is the success of a party of northern warriors who, in 1818, were the first to use guns against the Taranaki peoples of the central western coast of the North Island. The attackers had only two old flintlocks, which they employed to shoot the chiefs of each enemy *pa*, or fortified village. When the defenders heard the noise of the guns and saw their leading warriors fall without, as far as they could see, having been struck, they concluded that supernatural forces were at work, that gods had joined in the fighting. Accordingly, when the attackers stormed a *pa*, they found their enemy panic-stricken and offering no effective resistance to being slaughtered with the traditional Maori clubs and spears. After every battle, the northern war party remained to feast on the flesh of the slain, taking care to leave no survivors to carry the alarm to the next settlement.²⁴

During this early period, the Maoris calculated the strength of war parties not so much by the number of men they had but by the number of muskets. In 1819, a party with twelve muskets was considered strong, while one armed with fifty guns was regarded as having terrifying power. As increasing numbers of Maoris learned about the effectiveness of the new weapons, an arms race developed. By 1820, English visitors to the Bay of Islands were estimating that the Maoris there had "some hundred stand of arms" or even as many as 500, and in the following year a Bay of Islands missionary wrote that he did not think there could be "less than two thousand stands of Arms among the Natives."²⁵ By 1826, one of the missionaries was speaking

²⁴ Discussions similar to mine in this paragraph may be found in H. Wright, 84-85, and W. T. L. Travers, "The Life and Times of Te Rauparaha," *Transactions and Proceedings of the New Zealand Institute*, 5 (1872), 46-47. My account of the expedition against the Taranaki peoples is based on S. Percy Smith, *History and Traditions of the Maoris of the West Coast* (New Plymouth, 1910), 286; and Archdeacon P. Walsh, "The Passing of the Maori," *Transactions and Proceedings of the New Zealand Institute*, 40 (1907), 157.

²⁵ Cited in H. Wright, 91. Chapter 5 of Wright's book is a valuable secondary source on the introduction and spread of muskets among the Maoris. Other sources that I have used in writing this and the next six paragraphs on the

about "many thousand stands of arms." Tribes at some distance from the favored ports of call for European ships were less well supplied, but once they had suffered from the power of guns, they made the most strenuous efforts they could to obtain them. The growing overseas demand for such New Zealand products as flax and timber ensured a flow of muskets and powder from the Europeans' trading vessels to the Maoris, for the latter increasingly would accept nothing else in exchange for the goods which the foreigners sought. Even the missionaries were sometimes reduced to trading guns to the Maoris in order to obtain food supplies or timber from them. In time, the whole North Island became something like one great camp of musket-armed warriors.

The destructive use of the new means of war in pursuit of the traditional goal of revenge is epitomized in the post-European career of Chief Hongi Hika. In 1820, desirous of obtaining arms, he arranged to be taken to England by the missionary, Thomas Kendall. Hongi was presented to King George IV and met a number of other influential persons, who became impressed with his intelligence and his professions of desire to work for the welfare of his people. These professions were not necessarily hypocritical, since, to Hongi, his people's welfare depended upon their aggressively avenging past defeats and injuries. Although he was unsuccessful in obtaining more than two or three guns in England, he did receive numerous gifts of plows and other agricultural tools to help him bring civilization to the Maoris. On the return voyage, Hongi stopped in Sydney and there traded his stock of

use of muskets in Maori warfare are Judith Binney, *The Legacy of Guilt* (Christchurch, 1968), 85 ff.; T. W. Gudgeon, chaps. 11, 13-21; Francis Hall, "Extracts from the Journal of Mr. Francis Hall" in *Missionary Register for MDCCCXXIII* (London, 1823), 504-08; James Hamlin, "On the Mythology of the New Zealanders," *Tasmanian Journal*, 1 (1842), 345-54; René P. Lesson, *Voyage autour du monde* (Paris, 1839), II, chap. 21; Smith, *Maori Wars*, 15-18 and *passim*; E. J. Tapp, *Early New Zealand* (Melbourne, 1958), chap. 3 and p. 178; Thomson, I, 258-62, 298-99; Travers, 47; Walsh, 157-58; and White, *Ancient History*, V, 168-76. My account of the offenses that Hongi Hika of the Nga Puhi was avenging in his expeditions is based mainly on Smith, *Maori Wars*, 46-49, 177-79, 182-84, 198, 204-07, 225, 241-42 and 330; cf. L. G. Kelly, "Fragments of Ngapuhi History," *Journal of the Polynesian Society*, 47 (1938), 179-80; Samuel Marsden, *The Letters and Journals of Samuel Marsden 1765-1838*, (ed.) J. R. Elder (Dunedin, 1932), 242-43.

implements and other gifts for muskets and powder. These transactions provided him and his people with an armory of 300 guns and a new supply of ammunition.

Less than two months after returning to the Bay of Islands in 1821, Hongi was ready to put the new arms to use. An expedition for revenge was organized against two tribes living to the south, the Ngati Paoa and Ngati Maru of the Hauraki Gulf and Firth of Thames area. A member of the Ngati Paoa tribe, probably in the previous year, had treacherously killed a Nga Puhi man and the Ngati Maru had defeated Hongi's Nga Puhi in a battle fought with native weapons in the last decade of the eighteenth century. Such murders and defeats called for revenge, and Hongi now had the means of obtaining it. The expedition was of unprecedented magnitude—one of the missionaries, Francis Hall, estimated that the expedition was going to have "at least 1000 muskets and perhaps more than double that Number of Men"—and it was successful. The relatively few muskets of the people attacked were insufficient to make them any match for the northern forces, and the ramparts and other traditional defenses of the *pa* of Hongi's enemies afforded them little protection when Hongi's men could erect wooden platforms to serve as elevated vantage points for the firing of musket balls. In their attacks on only one Ngati Maru *pa* and two Ngati Paoa ones, the Nga Puhi killed some two thousand people and, according to some accounts, took an equal number as prisoners.

Soon after this, Hongi rallied his followers for another and even more formidable expedition. According to one missionary observer, there were over three thousand warriors in the force that embarked from the Bay of Islands at the end of February 1822. The victims this time were to be the people of the Waikato River against whom the Nga Puhi had a number of *take*, or causes for war. There was an unavenged Nga Puhi defeat in battle as well as some specific deaths for which the Waikato were held responsible, especially the deaths of two young chiefs who had been killed in the previous year as they were attacking the Ngati Maru *pa*, which some Waikato were helping to defend. On hearing about the new Nga Puhi expedition, the Waikato people, who had no guns, assembled in a single, very large *pa*, perhaps in the hope that their numbers alone (variously estimated at between 5,000

and 10,000 people) might save them. This was not to be the case. Indeed, the issue was decided almost immediately after Hongi's warriors arrived at the *pa* and disembarked from their canoes. The guns were fired, and the people inside the *pa*, many of whom had not previously seen the European weapons in operation, began to flee in dread. As the firing increased, so did the panic of those inside. Many of the fleeing fell into the ditch surrounding the *pa*, and the first to fall had others fall on top of them with the result that hundreds were smothered or trodden to death. The Waikato warriors who waited to meet the attackers in close combat were shot as they rushed up to be near enough to the enemy fighters to use their wooden weapons. The Waikato were driven from the *pa* and, by the estimate which Hongi subsequently gave to the missionaries, lost 1500 people. Nga Puhi deaths in the engagement were but a small fraction of this.

Before Hongi's death in 1828, he and other Nga Puhi chiefs led campaigns against tribes of various other districts, including Kaipara, which is near the Bay of Islands, and the Bay of Plenty and the East Coast, which are far away, farther than any Nga Puhi war parties had ranged prior to the nineteenth century.²⁶ A main objective in these campaigns, which resulted in the slaughter of several thousand more Maoris, was still vengeance. Thus, the major Nga Puhi expedition in 1823, against a Bay of Plenty tribe called Te Arawa, was in revenge for a Te Arawa subtribe's treacherous massacre of a Nga Puhi party in 1822. And Hongi's last great victory, against the Ngati Whatua of Kaipara in 1825, was the Nga Puhi's revenge for a series of stinging defeats in pre-musket times, particularly a defeat in which 150 or more Nga Puhi had died at Moremo-nui stream in 1807. Hongi's father and half-brother were among those who had fallen in battle at Moremo-nui, and his sister had also been killed there by some Ngati Whatua, who, before Hongi's eyes, had first subjected her body to various abuses and had then thrown her alive onto the hot oven stones. It is said that Hongi's main purpose in making his trip to England had been to secure arms for avenging the deaths at Moremo-nui.

²⁶ According to the traditional accounts, the Hauraki Gulf was the furthest south that any expedition of northern warriors penetrated until the early years of the nineteenth century; Smith, *Maori Wars*, 17. Cf. Firth, 430.

Their expeditions earned Hongi and the Nga Puhi an early notoriety, but there were others, like the Ngati Toa led by Te Rauparaha and the Ngati Haua led by Te Waharoa, who also raided widely, frequently, and fiercely once they got hold of muskets. Te Rauparaha and his men even carried the new brand of warfare across Cook Strait to the east coast of the South Island where they raided as far south as Kaiapoi near the present city of Christchurch. In the North Island, there was hardly any district spared from the depredations of warriors armed with guns.

These other aggressors of the musket era were also, for the most part, bent upon revenge. Acquisition of guns enabled them to square accounts with numerous traditional enemies at whose hands they had suffered defeats earlier. And, it should be noted, traditional enemies were not the only ones against whom guns were directed by revenge-seekers in the 1820s and 1830s. Any injuries received from friends and allies of an attacked foe had also to be avenged and now for the first time, with guns available, they readily could be. This is illustrated by Hongi's expedition against the Waikato. Te Rauparaha's first attack upon the Ngai Tahu of the South Island was similarly motivated by a desire for revenge, for some Ngai Tahu had participated in an unsuccessful attack upon Te Rauparaha's forces on Kapiti Island near the present city of Wellington and one of their chiefs was known to have subsequently uttered the insulting boast that "if ever Te Rauparaha dared to set foot on his land, he would rip his belly open with a shark's tooth."²⁷

In the case of Te Rauparaha's wars, the traditional motive of acquiring land was also operating. Some writers have interpreted territorial conquests by Te Rauparaha and other Maoris in the musket era as evidence of certain new motivations for war—motivations which, for convenience, we might call "Napoleonic," since they are alleged to have been patterned on the example of Napoleon's career of empire-building in Europe.²⁸ The interpretation cannot be said to be well founded, for, regardless of the knowledge that

²⁷ T. Lindsay Buick, *An Old New Zealander or, Te Rauparaha, the Napoleon of the South* (London, 1911), 122.

²⁸ For examples of this interpretation, see Smith, *Maori Wars*, 15 and the citations in H. Wright, 119-21.

particular chiefs may have had of Napoleon's career, it remains that the conquests of the 1820s and 1830s were cast much more in the traditional Maori mold than in any Napoleonic one. No evidence exists that effective political consolidation was a result or even an aim of the conquests. Defeated people were not, as a rule, kept on their former land and made politically subject to their conquerors. Instead, following the traditional pattern, conquerors, for the most part, killed members of the defeated group and excluded them from their former territories. Te Rauparaha, designated by one biographer as the "Napoleon of the South," does not seem to have been an exception to this. He is described by the same biographer as having preached to his followers a doctrine of exterminating the North Island tribes whose lands in the Wellington vicinity the Ngati Toa were taking.²⁹

In the campaigns led by Hongi, there were never even any attempts to take over the lands of defeated enemies. And this was the chief whom the missionary, Samuel Marsden, had proposed as the person to become a king and bring peace and stable government to New Zealand.³⁰ The fact is that Hongi was never fully successful in securing his authority even within his own tribe. As long as he was well supplied with guns and other Nga Puhi chiefs were not, he could call out all the sections of the tribe for his expeditions, for none wished to have Hongi's guns directed against themselves. Even so, in the attack on one Ngati Paoa *pa* in the expedition of 1821, the men of four or five of the Nga Puhi subtribes asserted their independence by refusing to take part, although they did join their tribesmen in the remainder of the campaign, and the bullet wound from which Hongi eventually died was received in a battle in which some of his former followers were arrayed against him. Later, when guns were general among the Maoris, according to one missionary the war cry could go from village to village in the Bay of Islands without any effect, and only with the "utmost difficulty" could a sufficient number of men be mobilized to take part in fighting beyond their own

²⁹ Buick, 87. Buick's book suggests (p. 126) that Te Rauparaha's policy in the South Island may have been different, but the details are hazy.

³⁰ Marsden, 386, 388.

immediate districts.³¹ There was no fuel here for Napoleonic ambitions. The reasonable interpretation is the one suggested earlier: that new means were being used in the service of traditional objectives.

The Maladaptive Effects

The traditional system was disrupted with the weakening of the nexus between Maori warfare and variations among groups in population pressure and in manpower, and this weakening was effected partly through disruption of the localization of the system. The revenge-seekers of the musket era were turning their guns not only upon their nearby enemies with whom the traditional testing process could operate in pre-European times through repeated offenses, raids, and counter-raids and regulated escalations to attempted territorial conquests. It must be remembered that the Maoris themselves understood revenge rather than any testing process to be the object of their expeditions, now undertaken to distant places in retaliation for offenses, which could not even have been committed if not for Maori intercourse with Europeans. For example, when European ships landed Maoris in parts of New Zealand far from their homes, they put ashore stowaways, temporary seamen who could not be taken back to England, men intended for labor in timbercutting, and even women sold as slaves. Conflicts inevitably developed between some of these Maoris and the local inhabitants, resulting in insults and injuries which constituted intertribal offenses involving tribes that previously had had virtually no intercourse with one another. Such problems developed when a group of the women, abducted in 1806 from various points in the northern part of the North Island by a crew of European mutineers on the brig *Venus*, were eventually sold by the sailors to chiefs in the Bay of Plenty and East Coast districts. There they served for a time as wives and slaves, but when quarrels arose, were put to death. It was in revenge for these of-

³¹ William Yate, *An Account of New Zealand* (London, 1835), 119. My other sources on the question of Hongi's authority are Marsden, 388; Smith, *Maori Wars*, 189, 398; Vayda, *Maori Warfare*, 33; White, "Maori Customs and Superstitions," 222-23; and H. Wright, 120-21.

fenses that some of the earliest Nga Puhi expeditions against distant tribes took place.³²

Other expeditions beyond the pre-European range of military operations resulted from the fact that any injuries received by an attacking force from friends and allies of the enemy could now, with guns available, also be readily avenged. Hongi's expedition against the Waikato people in 1822 illustrates this, since he was, as previously noted, avenging Nga Puhi deaths inflicted by Waikato warriors in the course of their defense of a Ngati Maru *pa* in 1821. Te Rauparaha's first expedition across Cook Strait against the Ngai Tahu of the South Island was, it should be recalled, similarly motivated.

Such expeditions against faraway tribes could not be undertaken before the nineteenth century. When there were no guns to give security to attacking parties, distant places were full of peril for them, because any people attacked there would have had many friends and allies nearby. The introduction of guns disrupted also whatever correspondence had previously obtained between success in warfare and the relative manpower of groups for exploiting land. Maori local groups in the early part of the musket era were being confronted with attacking forces drawn not from one or two enemy villages or subtribes but rather from many villages and even from different tribes. Such forces were veritable armies and could be formed because the prospect of victory by virtue of having guns drew warriors together from different groups with common foes.³³ The ease with which such forces defeated enemy village communities one by one is illustrated by the success of the northern tribes' expedition along the west coast of the North Island in 1819 and 1820, an expedition that took warriors of the

³² My discussion of Maoris put ashore away from their homes follows H. Wright, 83-84. On the abductions by the *Venus* crew, see also Smith, *Maori Wars*, 56-57, 90, 156, and the references cited in C. W. Vennell, *The Brown Frontier* (Wellington, 1967), 179.

³³ It has, in fact, been suggested that the people called Nga Puhi in the 1820s included some Bay of Islands and Hokianga groups not previously regarded as belonging to the Nga Puhi tribe. This greater Nga Puhi complex may have been "an unstable political association brought about by the advent of the musket to the Bay"; Binney, *Legacy of Guilt*, 58, n. 6. Cf. Jean Kennedy, *Settlement in the South East Bay of Islands, 1772* (University of Otago, Dunedin, 1969), 88 (Mimeo).

Nga Puhi and Te Roroa tribes as far south as Wellington and involved the capture of one *pa* after another en route and the slaughter of those attacked and the consumption of their flesh.³⁴ Clearly there was no test of the relative capacity of tribes to use the land when engagements were between the members of a single local group or village community of one tribe and an attacking force composed of the men of the various sections of two different tribes. Also, the attackers obviously were greatly aided by having guns. Even gathered in one place and having the advantage of numerical superiority, a tribe armed with only native weapons was no match for musket-armed attacking forces. Instead of reflecting the relative capacities of groups to use particular territories, outcomes of engagements in the early part of the musket era reflected mainly the relative success of groups in obtaining guns.

Moreover, in addition to failing to obtain the benefits of the traditional system, the Maoris in the musket era suffered other, ultimately lethal adversities because of the use of new means of warfare in pursuit of traditional goals. There was, first of all, a substantial increase in mortality resulting directly from warfare. The Nga Puhi were said to have killed some 3,500 people in only their first two expeditions after Hongi's return from England. This estimate may be exaggerated to some extent, but it is probably safe to assume that the people slaughtered in the course of Hongi's several expeditions in the musket era did number in the thousands. It is true that in the later fights when both sides were well armed with guns, the number of casualties relative to the number of combatants may often have been less than in the old days of hand-to-hand fighting when many men could be killed once a rout had commenced.³⁵ Moreover, warfare began to decline in the

³⁴ Described in Smith, *Maori Wars*, 96ff.

³⁵ Proceedings in the case of routs in pre-musket times are described in F. E. Maning, *Old New Zealand, a Tale of the Good Old Times; and a History of the War in the North* (London, 1876), 147-48, by an old Maori who had been active in fighting from the 1770s on:

... when once the enemy broke and commenced to run, the combatants being so close together, a fast runner would knock a dozen on the head in a short time; and the great aim of these fast-running warriors ... was to chase straight on and never stop, only striking one blow at one man, so as to cripple him, so that those behind should be sure to overtake and finish him. It was not uncommon for one man, strong and swift of foot, when the

1830s as the various tribes and subtribes succeeded in equalizing their supplies of firearms. However, the great increase in the scale and frequency of fighting in the first part of the musket era no doubt did result in a much greater total number of deaths in Maori warfare than had ever occurred previously in a comparable period of time.³⁶

To the mortality from battle itself must be added the deaths caused in other ways by the guns.³⁷ Starvation resulted from the new warfare and from the race to acquire the arms for engaging in it. Despoilation of gardens and other food preserves by enemy expeditions contributed to food shortages, while continual attacks or the fear of them made it impossible for the people of some districts to give due attention to the production of food. There was, moreover, widespread neglect of subsistence labors in general as all Maoris applied themselves to the tasks of producing the flax and other goods that could be traded to Europeans for guns and ammunition.³⁸ One European observer, F. E. Maning, who lived with the Maoris from 1833 on, noted that for one or two muskets the people had to give a ton of flax, "scraped by hand with a shell, bit by bit, morsel by morsel, half-quarter of an ounce at a time." Maning's conclusion was:

Now as the natives, when undisturbed and labouring regularly at their cultivations, were never far removed from necessity or scarcity of

enemy were fairly routed, to stab with a light spear ten or a dozen men in such a way as to ensure their being overtaken and killed.

³⁶ On battle mortality in the musket era, see Smith, *Maori Wars*, 17-18 and *passim*; J. Rutherford, ms, cited in Judith Binney, "Christianity and the Maoris to 1840: A Comment," *New Zealand Journal of History*, 3 (1969), 149, n. 30; and the sources cited in Vayda, *Maori Warfare*, 86.

³⁷ Sources on this include Gordon Lewthwaite, "The Population of Aotearoa: Its Number and Distribution," *New Zealand Geographer*, 6 (1950), 41-42; Maning, 158-63; Edward Markham, *New Zealand or Recollections of It*, (ed.) E. H. McCormick (Wellington, 1963), 46-47; Marsden, 386; Polack, II, 344; Vayda, *Maori Warfare*, 69; Walsh, 158-59; and H. Wright, 76-78.

³⁸ Production for trade rather than for Maori subsistence is also the work to which were assigned the large numbers of slaves being kept for the first time by some tribes. In earlier days, each group had kept only a few prisoners of war as slaves and had used them only in menial tasks connected with cooking and burden-bearing. I have noted elsewhere how the guns changed this; see my *Maori Warfare*, 106-07, and "Maori Prisoners and Slaves in the Nineteenth Century," *Ethnohistory*, 8(1961), 144-55.

food, we may easily imagine the distress and hardship caused by this enormous imposition of extra labour. They were obliged to neglect their crops in a very serious degree, and for many months in the year were in a half-starving condition, working hard all the time in the flax swamps.³⁹

As Maning's statement suggests, the Maoris, because of the guns, were not only neglecting their subsistence labors but were also working themselves to exhaustion to produce goods for trade. The guns had yet another effect which made the Maoris easy prey to pulmonary disease and death: the move from airy settlements on high ground to makeshift residences by the swamps where the flax grew best. Hilltops, to which food, fuel, and water had to be carried from below, had once provided advantages for defense against attacking parties, but they did no longer. Time, made newly precious by having to work in order to buy guns, could be saved by the Maoris living near the flax and timber and also near the available sources of provisions, and the people descended to the lowlands where,

in mere swamps they built their oven-like houses, where the water even in summer sprung with the pressure of the foot, and where in winter the houses were often completely flooded. There, lying on the spongy soil, on beds of rushes which rotted under them—in little, low dens of houses, or kennels, heated like ovens at night and dripping with damp in the day . . . and impossible to ventilate—they were cut off by disease in a manner absolutely frightful.⁴⁰

Accurate figures on the number of Maoris that perished in one way or another because of warfare in the early nineteenth century are unavailable, but nobody seems to have estimated the number at less than 20,000 and some who have reckoned it as high as 80,000 have suggested that between one-quarter and one-half of the total number of Maoris in New Zealand was lost.⁴¹ Even if we allow for substantial exaggeration in the last estimates the Maori losses on account of the guns were considerable, and these losses, it must be recalled, were without the kinds of offsetting gains that

³⁹ Maning, 162-63.

⁴⁰ *Ibid.*, 160.

⁴¹ Various estimates are cited in Lewthwaite, 42-43. See also Thomson, I, 261, and H. Wright, 102.

had been formerly accruing from the operation of the traditional system.

If we can say then that the warfare of the musket era was maladaptive for the Maori population as a whole, it becomes noteworthy that the course of developments which we have been considering is consistent with the concept of "cultural lag" as used to describe the genesis of maladaptation among human populations. That is to say, here, as in many other cases, change in certain practices that had been adaptive lagged behind other changes which were making the practices maladaptive.⁴² Fighting for revenge as part of an adaptive system had also become an unquestioned part of what the Maoris regarded as right and necessary and were teaching their children to regard in the same way. Fighting for revenge had become this to such an extent that the Maoris continued to fight for revenge under conditions which not only precluded the operation of the traditional adaptive system but also had other maladaptive consequences. The effectiveness and institutionalization of the earlier adaptation may be said then to have been responsible for the cultural lag resulting in the later maladaptation.⁴³

Actually, the lag was very brief in time. By 1830, the value of fighting for revenge was, according to the missionaries' accounts, being questioned by many of the Nga Puhi, who found themselves increasingly beset by death and illness and threatened by their erstwhile victims who now also had guns.⁴⁴ Moreover, when

⁴² For examples of other cases of this, see Amos H. Hawley, *Human Ecology* (New York, 1950), 27-28, and Vayda, "An Ecological Approach in Cultural Anthropology," *Bucknell Review*, 17 (1969), 1, pp. 112-19. A striking case referred to by the latter is the persistence of infanticide among certain South American Indians whose early contacts with Europeans and their decimating diseases were making underpopulation rather than overpopulation a critical problem. Details of this are given in Charles Wagley, "Cultural Influences on Population: A Comparison of Two Tupi Tribes," *Revista do Museu Paulista*, n.s., 5 (1951), 95-104.

⁴³ An example of generalized interpretive statements along similar lines (although in somewhat different language) is the following by the social psychologist, Donald T. Campbell: "The 'wisdom' produced by biological and societal evolution is retrospective, referring to past environments. It is only adaptive to the extent that these environments remain stable. Yet the rigid preservation systems essential for the process of evolution also provide for a retention of . . . [traditional] systems long beyond their usefulness"; Campbell, 35.

⁴⁴ See the citations in H. Wright, 100, 147.

all the tribes were equipped with muskets, it soon became apparent that easy victories could no longer be won. There was, accordingly, a decline in the resort to arms throughout New Zealand in the latter part of the 1830s. By 1840, the year which saw the beginning of organized European colonization of New Zealand, many Maoris had found in Christianity a new set of values according to which not taking revenge for injuries suffered could, most opportunely, be justified.⁴⁵ Firearms were cast aside, to be used again only years later when the Maoris fought to stop the European settlers from taking their lands. And yet the very brevity of the lag in adjusting to the muskets is significant, for we can see in the Maori experience how calamitous and destructive even a brief period can be when potent new technologies are employed by men locked, however temporarily, into traditional, culturally sanctioned patterns of thought and action. This has portents for us in our own time of accelerated technological change, disrupted ecological systems, and distant and costly wars being fought for objectives persisting from the past.

⁴⁵ Documentation on the decline in warfare is provided once more by H. Wright (100-01, 147, 159), an invaluable secondary source on almost all aspects of the European impact on the Maoris before 1840. Wright's book includes a chapter on the rapid and massive conversion of the people to Christianity in the late 1830s and early 1840s. See also Binney, "Christianity and the Maoris"; Buck, *Coming of the Maori*, 524; Carleton, 178; and Rev. William Williams, *Christianity among the New Zealanders* (London, 1867), 89 ff., 267-68, and *passim*.